SuperStack® 3
Switch 3300 XM
User Guide

3C16985B

http://www.3com.com/

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ABOUT THIS GUIDE

This guide provides all the information you need to install and use a SuperStack® 3 Switch 3300 XM (3C16985B) unit with default settings. If you want to change the way the Switch works using management software, refer to the "SuperStack Switch Management Guide".

The guide is intended for use by network administrators who are responsible for installing and setting up network equipment; consequently, it assumes a basic working knowledge of LANs (Local Area Networks).

If the information in the release notes that are shipped with your product differs from the information in this guide, follow the instructions in the release notes.

Most user guides and release notes are available in Adobe Acrobat Reader Portable Document Format (PDF) or HTML on the 3Com World Wide Web site:

`http://www.3com.com/`

This guide makes reference to the SuperStack 3 Switch 3300 MM. This Switch has three fixed Matrix Ports on its rear panel and can be used to stack any 1100/3300 family Switch. Note that any 1100/3300 family Switch fitted with a Matrix Module can also be used to stack Switches.

All the Switches mentioned in this guide are compatible with the Switches found within the SuperStack 1100/3300 family range.

Conventions

Table 1 and Table 2 list conventions that are used throughout this guide.

Table 1 Notice Icons

Icon	Notice Type	Description
ℹ	Information note	Information that describes important features or instructions
⚠	Caution	Information that alerts you to potential loss of data or potential damage to an application, system, or device
⚡	Warning	Information that alerts you to potential personal injury

Table 2 Text Conventions

Convention	Description
`Screen displays`	This typeface represents information as it appears on the screen.
`Syntax`	The word "syntax" means that you must evaluate the syntax provided and then supply the appropriate values for the placeholders that appear in angle brackets. Example: To change your password, use the following syntax: `system password <password>` In this example, you must supply a password for <password>.
`Commands`	The word "command" means that you must enter the command exactly as shown and then press Return or Enter. Commands appear in bold. Example: To display port information, enter the following command: **`bridge port detail`**
The words "enter" and "type"	When you see the word "enter" in this guide, you must type something, and then press Return or Enter. Do not press Return or Enter when an instruction simply says "type."
Keyboard key names	If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press Ctrl+Alt+Del

Table 2 Text Conventions (continued)

Convention	Description
Words in *italics*	Italics are used to: ■ Emphasize a point. ■ Denote a new term at the place where it is defined in the text. ■ Identify menu names, menu commands, and software button names. Examples: From the *Help* menu, select *Contents*. Click *OK*.

Related Documentation

In addition to this guide, each Switch 3300 XM document set includes the following:

- *Management Guide*

  This guide contains all the management information for the Switch.
- *Quick Reference Guide*

  This guide contains a quick summary of the hardware and software information for the Switch.
- *Quick Installation Guide*

  This guide contains a summary of the package contents, and a quick summary of the installation information for the Switch.
- *Release Notes*

  These notes provide information about the current software release, including new features, modifications, and known problems.
- *SuperStack Switch Help*

  This help provides information about the web interface software of the Switch. It is supplied on the SuperStack Switch CD-ROM.
- *SuperStack Switch README File*

  This file provides information about the current software release, including new features, modifications, and known problems. It is supplied on the SuperStack Switch CD-ROM.

In addition, there are other publications you may find useful:

- Documentation accompanying the Advanced Redundant Power System.

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- Document title
- Document part number (on the title page)
- Page number (if appropriate)

Example:

- SuperStack 3 Switch 3300 XM User Guide
- Part Number DUA1698-5AAA03
- Page 21

Product Registration

You can now register your SuperStack 3 Switch on the 3Com web site to receive up-to-date information on your product:

`http://support.3com.com/warrantyregistration/register.pl`

1

INTRODUCING THE SWITCH 3300 XM

This chapter contains introductory information about the Switch and how it can be used in your network. It covers the following topics:

- About the SuperStack 3 Switch 3300 XM
- Switch 3300 XM — Front View Detail
- Switch 3300 XM — Rear View Detail
- Network Configuration Examples
- Configuration Rules for Fast Ethernet
- Configuration Rules with Full Duplex

About the SuperStack 3 Switch 3300 XM

The SuperStack® 3 Switch 3300 XM connects:

- your existing 10Mbps devices.
- high-performance workgroups with a 100Mbps backbone or server connection.
- users to dedicated 100Mbps ports in one switch.

In addition, as part of the 3Com® SuperStack 3 range of products, you can combine it with any SuperStack II or SuperStack 3 system as your network grows.

Summary of Features

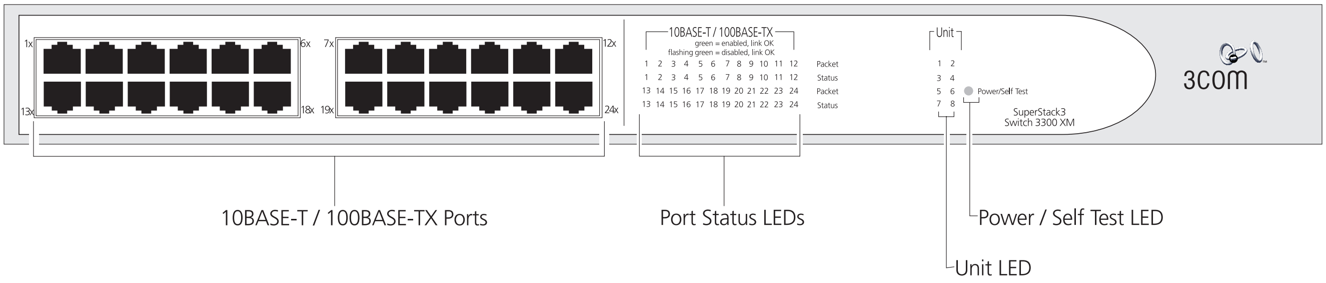
The Switch has the following hardware features:

- 24 Fast Ethernet autonegotiating 10BASE-T/100BASE-TX ports
- One Matrix Port for connecting units from the Switch 1100/3300 family to form a stack. This enables you to:
    - Connect two units back-to-back using a single Matrix Cable
    - Stack the Switch with up to three other units in the Switch 1100/3300 family, when one of the units is a Switch 3300 MM unit
- SuperStack architecture
    - Connects to Redundant Power System/Advanced Redundant Power System
    - 19-inch rack or stand-alone mounting

For information about the software features of the Switch, refer to the "SuperStack Switch Management Guide".

Switch 3300 XM — Front View Detail

Figure 1 Switch 3300 XM — front view


1x
6x
7x
12x
13x
18x
19x
24x
10BASE-T / 100BASE-TX
green = enabled, link OK
flashing green = disabled, link OK
Packet
Status
Packet
Status
Unit
Power/Self Test
SuperStack3
Switch 3300 XM
3com
10BASE-T / 100BASE-TX Ports
Port Status LEDs
Power / Self Test LED
Unit LED

10BASE-T/ 100BASE-TX Ports

The Switch has 24 auto-negotiating 10BASE-T/100BASE-TX ports configured as MDIX (cross-over). These ports can be set to 10BASE-T half duplex, 10BASE-T full duplex, 100BASE-TX half duplex, 100BASE-TX full duplex, or they can automatically detect the speed and duplex mode of a link and provide the appropriate connection. The maximum segment length is 100m (328ft) over Category 5 twisted pair cable.

As these ports are configured as MDIX (cross-over), you need to use a cross-over cable to connect to devices whose ports are MDIX-only. See “Choosing the Correct Cables” on page 30 for more information.

LEDs

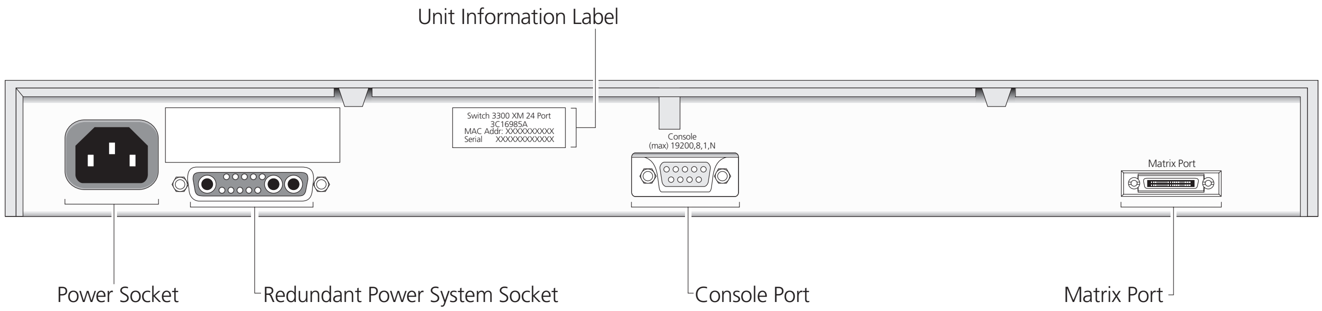
Table 3 (overleaf) lists the LEDs visible on the front of the Switch, and their states according to color. For information on using the LEDs for problem solving, see “Solving Problems Indicated by LEDs” on page 31.

Table 3 LED behavior

LED	Color	Indicates
Port Status LEDs		
Packet	Yellow	Packets are being transmitted/received on the port.
	Off	No packets are being transmitted/received on the port.
Status	Green	A link is present, and the port is enabled.
	Green flashing	A link is present, but the port is disabled.
	Off	No link is present.
Unit LEDs		
1–8	Green	The Switch forms a stack with other Switch units; the LED indicates the position of the Switch in the stack and that a link is present. Note that although there are eight LEDs, only four Switch units can be stacked at present.
	Off	The Switch is stand-alone.
Power/Self Test LED		
	Green	The Switch is powered-up.
	Green flashing	The Switch is either downloading software or is initializing (which includes running a Power On Self Test).
	Yellow	The Switch has failed its Power On Self Test.
	Off	The Switch is not receiving power.

Switch 3300 XM — Rear View Detail

Figure 2 Switch 3300 XM — rear view


Unit Information Label
Switch 3300 XM 24 Port
3C16985A
MAC Addr: XXXXXXXXXX
Serial XXXXXXXXXXXX
Console
(max) 19200,8,1,N
Matrix Port
Power Socket
Redundant Power System Socket
Console Port
Matrix Port

Unit Information Label

This label shows the following:

- The 3Com product name of the Switch
- The 3Com 3C number of the Switch
- The unique MAC address (Ethernet address) of the Switch
- The serial number of the Switch

You may need this information for fault reporting purposes.

Power Socket

The Switch automatically adjusts its power setting to any supply voltage in the range 90–240V A.C.

Redundant Power System Socket

To protect against internal power supply failure, you can use this socket to connect a SuperStack Advanced Redundant Power System (ARPS) to the Switch. See “Connecting a Redundant Power System” on page 29.

Console Port

The console port allows you to connect a terminal and perform remote or local out-of-band management. The console port uses standard null modem cable and is set to auto-baud, 8 data bits, no parity and 1 stop bit.

Matrix Port

The Matrix Port allows you to:

- Stack the Switch with another unit in the Switch 1100/3300 family using a single Matrix Cable
- Stack the Switch with up to three other units in the Switch 1100/3300 family, when one of the units is a Switch 3300 MM unit

For more information about the role of the Matrix Port, see "Stacking Units" on page 26.

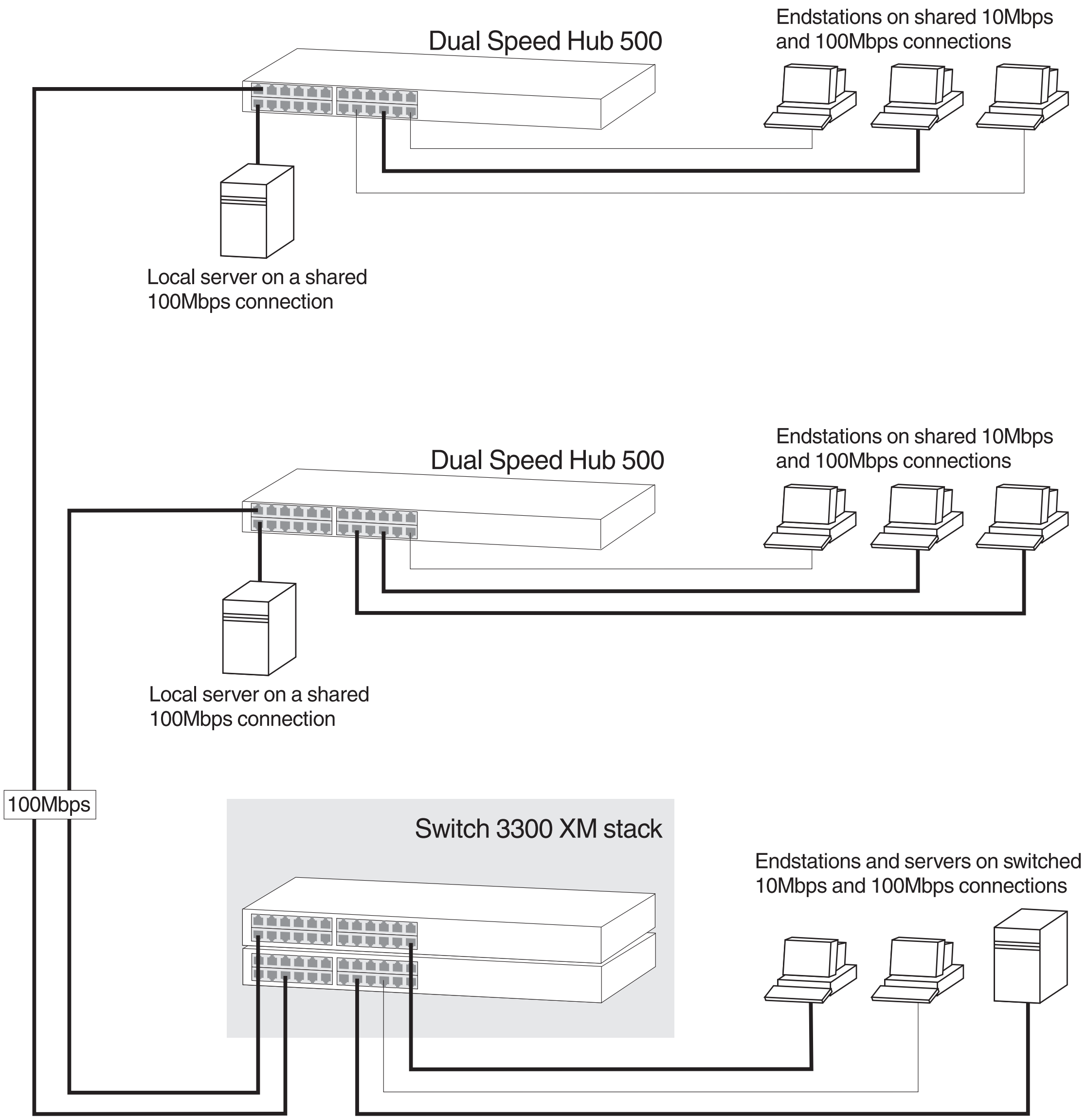
Network Configuration Examples

The following illustrations show some examples of how the Switch can be used in your network.

Switch 3300 XM as a Segmentation Switch

The example in Figure 3 shows how a Switch 3300 XM stack can segment a network of shared 10Mbps and 100Mbps connections. There is a 10/100 shared segment on each floor, and these segments are connected to the Switch which is positioned in the basement.

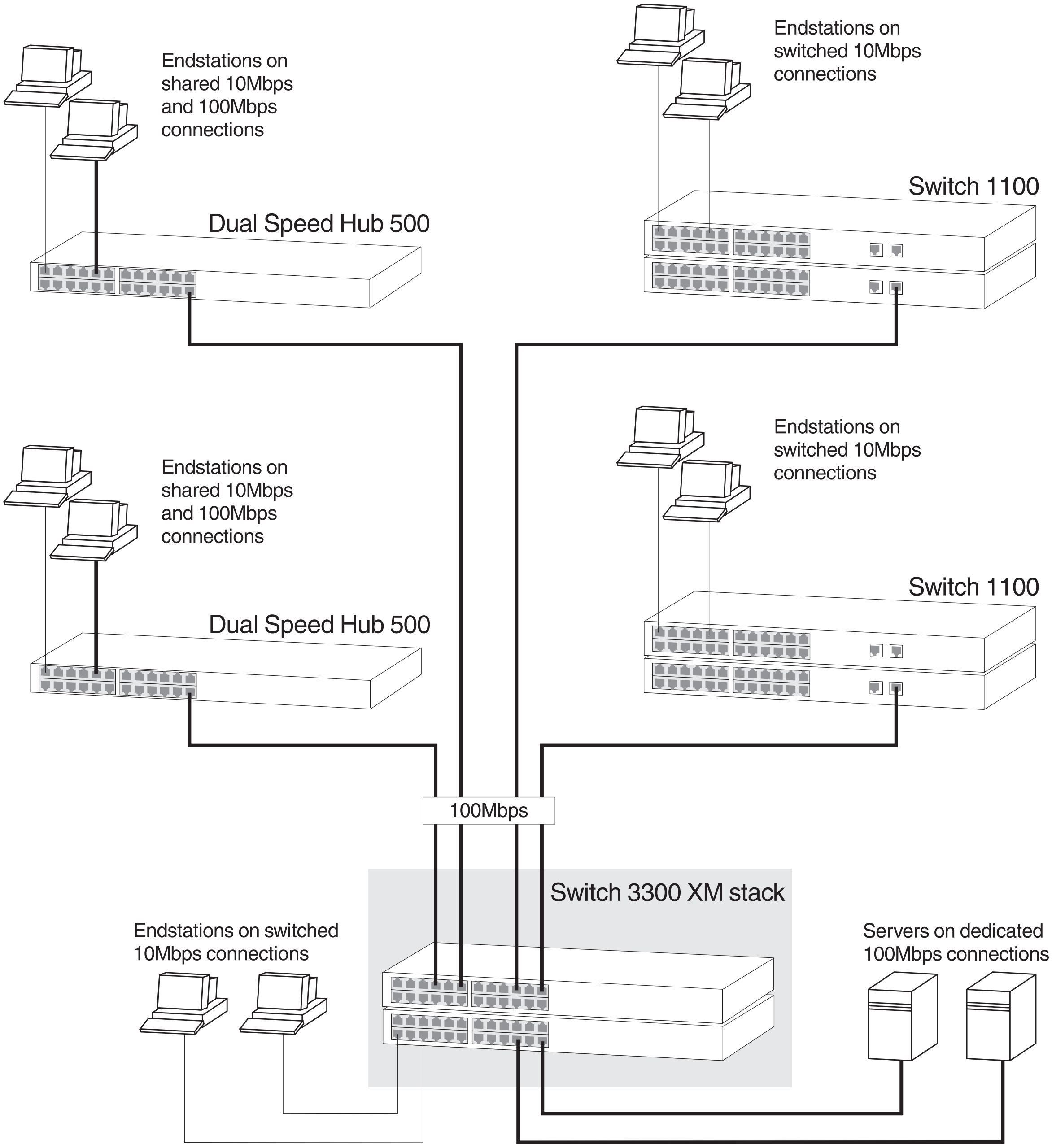
Figure 3 Using the Switch to segment your network


Dual Speed Hub 500
Endstations on shared 10Mbps and 100Mbps connections
Local server on a shared 100Mbps connection
Dual Speed Hub 500
Endstations on shared 10Mbps and 100Mbps connections
Local server on a shared 100Mbps connection
100Mbps
Switch 3300 XM stack
Endstations and servers on switched 10Mbps and 100Mbps connections

Switch 3300 XM as a Collapsed Backbone Switch

The example in Figure 4 shows how a Switch 3300 XM stack can act as a backbone for both shared and switched network segments.

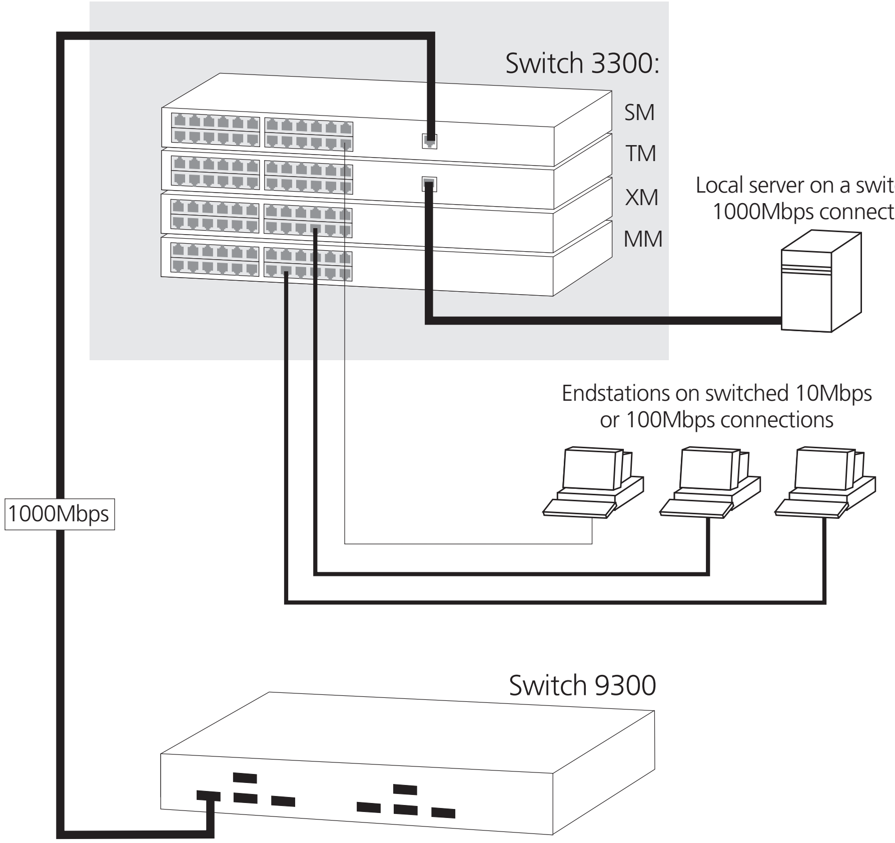
Figure 4 Using the Switch as a collapsed backbone


Endstations on shared 10Mbps and 100Mbps connections
Dual Speed Hub 500
Endstations on switched 10Mbps connections
Switch 1100
Endstations on shared 10Mbps and 100Mbps connections
Dual Speed Hub 500
Endstations on switched 10Mbps connections
Switch 1100
100Mbps
Switch 3300 XM stack
Endstations on switched 10Mbps connections
Servers on dedicated 100Mbps connections

Switch 3300 XM as a Desktop Switch

The example in Figure 5 shows how a Switch 3300 XM can be used, within a stack, for a group of users that require dedicated 10Mbps or 100Mbps connections to the desktop. The Switch 3300 SM provides a Gigabit Ethernet connection to a SuperStack II Switch 9300 in the basement whilst the Switch 3300 TM provides a Gigabit Ethernet connection to a local server.

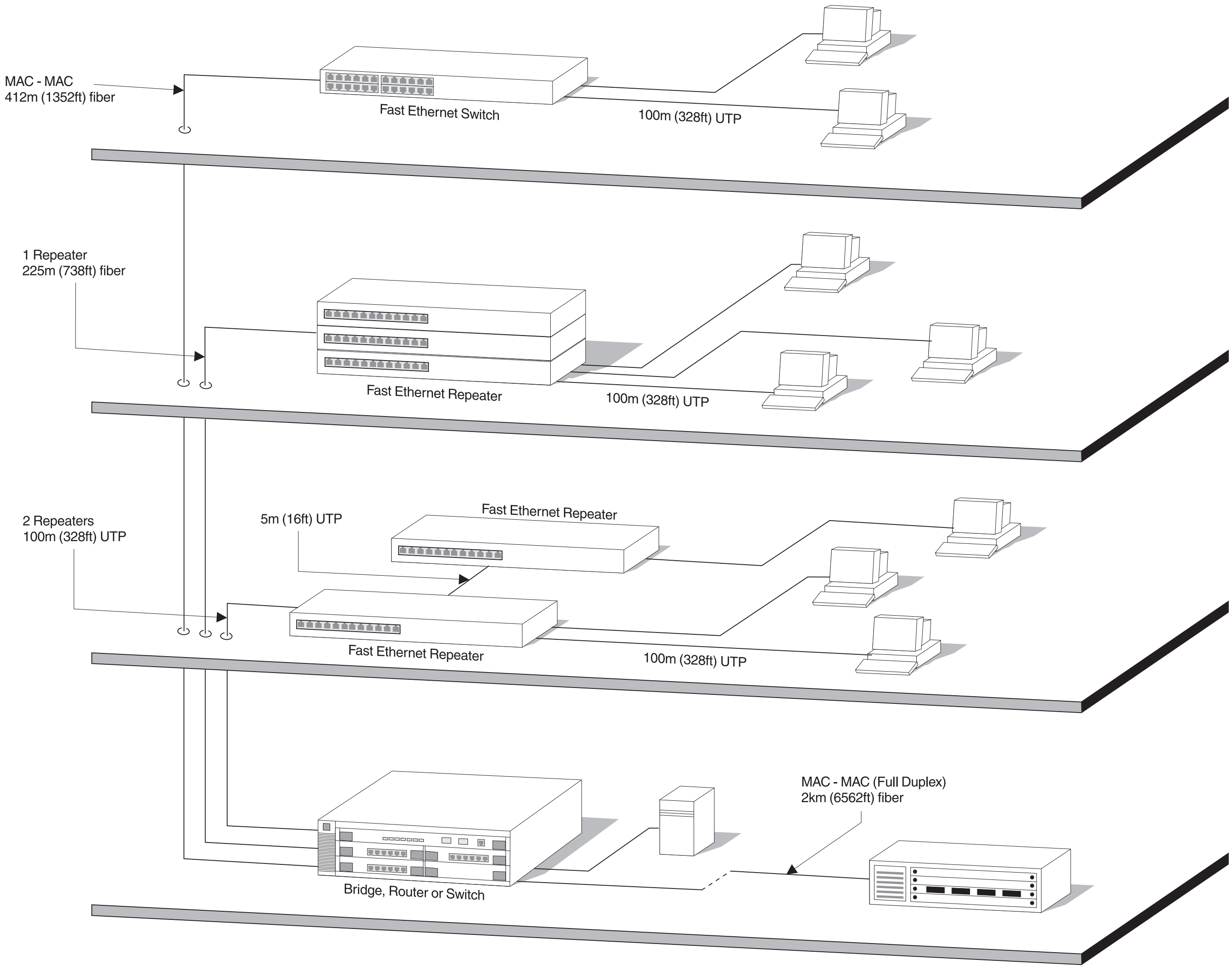
Figure 5 Using the Switch in a desktop environment


Switch 3300:
SM
TM
XM
MM
Local server on a switched 1000Mbps connection
Endstations on switched 10Mbps or 100Mbps connections
1000Mbps
Switch 9300

Configuration Rules for Fast Ethernet

The topology rules for 100Mbps Fast Ethernet are slightly different to those for 10Mbps Ethernet. Figure 6 illustrates the key topology rules and provides examples of how they allow for large-scale Fast Ethernet networks.

Figure 6 Fast Ethernet configuration rules


MAC - MAC
412m (1352ft) fiber
Fast Ethernet Switch
100m (328ft) UTP
1 Repeater
225m (738ft) fiber
Fast Ethernet Repeater
100m (328ft) UTP
2 Repeaters
100m (328ft) UTP
5m (16ft) UTP
Fast Ethernet Repeater
Fast Ethernet Repeater
100m (328ft) UTP
MAC - MAC (Full Duplex)
2km (6562ft) fiber
Bridge, Router or Switch

The key topology rules are:

- Maximum UTP cable length is 100m (328ft) over Category 5 cable.
- A 412m (1352ft) fiber run is allowed for connecting switch-to-switch, or endstation-to-switch, using half-duplex 100BASE-FX.
- A total network span of 325m (1066ft) is allowed in single-repeater topologies (one hub stack per wiring closet with a fiber run to the collapsed backbone). For example, a 225m (738ft) fiber link from a repeater to a router or switch, plus a 100m (328ft) UTP link from a repeater out to the endstations.

Configuration Rules with Full Duplex

The Switch provides full duplex support for all its ports. Full duplex allows packets to be transmitted and received simultaneously and, in effect, doubles the potential throughput of a link.

With full duplex, the Ethernet topology rules are the same, but the Fast Ethernet rules are:

- Maximum UTP cable length is 100m (328ft) over Category 5 cable.
- A 2km (6562ft) fiber link is allowed for connecting switch-to-switch, or endstation-to-switch.

2

INSTALLING THE SWITCH

This chapter contains the information you need to install and set up the Switch. It covers the following topics:

- Choosing a Suitable Site
- Rack-mounting
- Placing Units On Top of Each Other
- Stacking Units
- The Power-up Sequence
- Choosing the Correct Cables
- Solving Problems Indicated by LEDs
- Managing the Switch

WARNING: Safety Information. *Before installing or removing any components from the Switch 3300 XM or carrying out any maintenance procedures, you must read the safety information provided in Appendix A of this guide.*

AVERTISSEMENT: Consignes de sécurité. *Avant d'installer ou d'enlever tout composant du Switch 3300 XM ou d'entamer une procédure de maintenance, lisez les informations relatives à la sécurité qui se trouvent dans l'Appendice A de ce guide.*

WARNHINWEIS: Sicherheitsinformationen. *Bevor Sie Komponenten aus dem Switch 3300 XM entfernen oder dem Switch 3300 XM hinzufuegen oder Instandhaltungsarbeiten verrichten, lesen Sie die Sicherheitsanweisungen, die in Appendix A (Anhang A) in diesem Handbuch aufgefuehrt sind.*

Choosing a Suitable Site

The Switch is suited for use in an office environment where it can be mounted in a standard 19-inch equipment rack, or free standing. Alternatively, the Switch can be rack-mounted in a wiring closet or equipment room. A rack-mounting kit, containing two mounting brackets and four screws, is supplied with the Switch.

When deciding where to position the Switch, ensure that:

- You are able to meet the configuration rules detailed in "Configuration Rules for Fast Ethernet" on page 20.
- The Switch is accessible and cables can be connected easily.
- Cabling is away from:
  - Sources of electrical noise such as radios, transmitters and broadband amplifiers
  - Power lines and fluorescent lighting fixtures
- Water or moisture cannot enter the case of the Switch.
- Air-flow is not restricted around the Switch or through the vents in the side of the Switch. We recommend that you provide a minimum of 25mm (1in.) clearance.
- No more than four Switch units are placed on top of one another, if the units are free standing.
- If used in an office environment, the switch is positioned so that any noise from the fan is not disruptive.

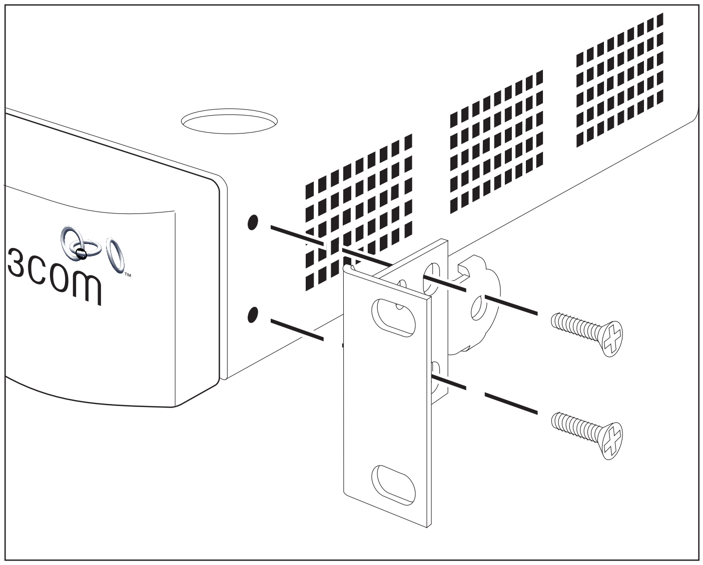
Rack-mounting

The Switch is 1U high and fits in most standard 19-inch racks.

CAUTION: *Disconnect all cables from the Switch before continuing. Remove all self adhesive pads from the underside of the Switch if they have been fitted.*

1. Place the Switch the right way up on a hard flat surface, with the front facing towards you.
2. Locate a mounting bracket over the mounting holes on one side of the Switch, as shown in Figure 7.

Figure 7 Fitting a bracket for rack mounting



3 Insert the two screws and tighten with a suitable screwdriver.

You must use the screws supplied with the mounting brackets. Damage caused to the unit by using incorrect screws invalidates your warranty.

4 Repeat steps 2 and 3 for the other side of the Switch.

5 Insert the Switch into the 19-inch rack and secure with suitable screws (not provided). Ensure that ventilation holes are not obstructed.

6 Connect network cabling.

Placing Units On Top of Each Other

If the Switch units are free-standing, up to four units can be placed one on top of the other. If you are mixing a variety of SuperStack Switch and Hub units, the smaller units must be positioned at the top.

If you are placing Switch units one on top of the other, you must use the self-adhesive rubber pads supplied. Apply the pads to the underside of each Switch, sticking one in the marked area at each corner. Place the Switch units on top of each other, ensuring that the pads of the upper unit line up with the recesses of the lower unit.

Stacking Units

Units in the Switch 1100/3300 family can be stacked together and then treated as a single manageable unit with one IP address.

The Matrix Port on the rear of the Switch allows you to connect two Switch units back-to-back. For this you need a Matrix Cable (part number 3C16965). Contact your supplier for details.

The Switches in a stack are numbered 1 to 4, from the bottom up, for management purposes. The SuperStack 3 Switch 3300 MM will always be identified as Unit 1 and should therefore be positioned at the bottom of the stack.

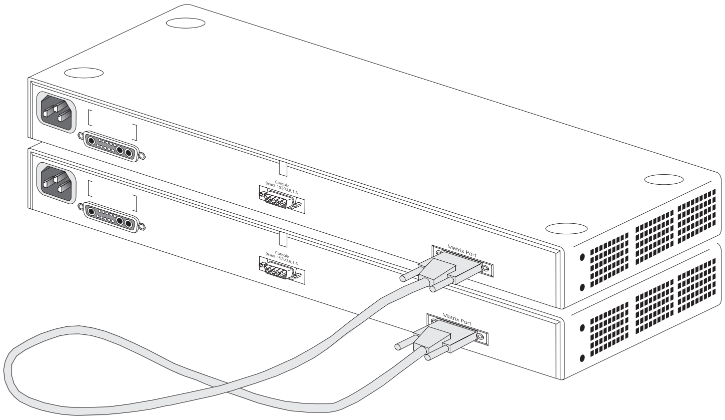
Stacking Two Units

You can stack two Switch units with a single Matrix Cable. To do this:

1. Power-off both units.
2. Arrange the units as required. They can be rack-mounted or free-standing; if you choose to have them free-standing, remember to position the rubber feet as detailed in "Placing Units On Top of Each Other" on page 25. When positioning the units, note that Matrix Cables are 1m (3.28ft) long.
3. Connect one end of the Matrix Cable to the Matrix Port of the top Switch, and the other end to the Matrix Port of the lower Switch (See Figure 8).
4. If you use the management software of the units:
   - Ensure that both units have the same version of management software
   - Ensure that you re-configure the stack-wide features on both units

   For more information about management software, see "Managing the Switch" on page 32.

Figure 8 A stack of two units



Stacking Up To Four Units

You can stack up to four Switch units using a Switch 3300 MM and the appropriate number of Matrix Cables.

You need only one SuperStack 3 Switch 3300 MM per stack.

To stack up to four Switch units:

1 Power-off all the units.

2 Arrange the units as required. They can be rack-mounted or free-standing; if you choose to have them free-standing, remember to position the rubber feet as detailed in "Placing Units On Top of Each Other" on page 25. When positioning the units, note that Matrix Cables are 1m (3.28ft) long.

3 Connect the Matrix Cables, as shown in Figure 9:

   a Connect a Matrix Cable to the port marked Unit 2 on the Switch 3300 MM. Connect the other end of this cable to the Matrix Port on the Switch placed immediately above the Switch 3300 MM.

   b Connect a second Matrix Cable to the port marked Unit 3 on the Switch 3300 MM. Connect the other end of this cable to the Matrix Port on the next Switch up.

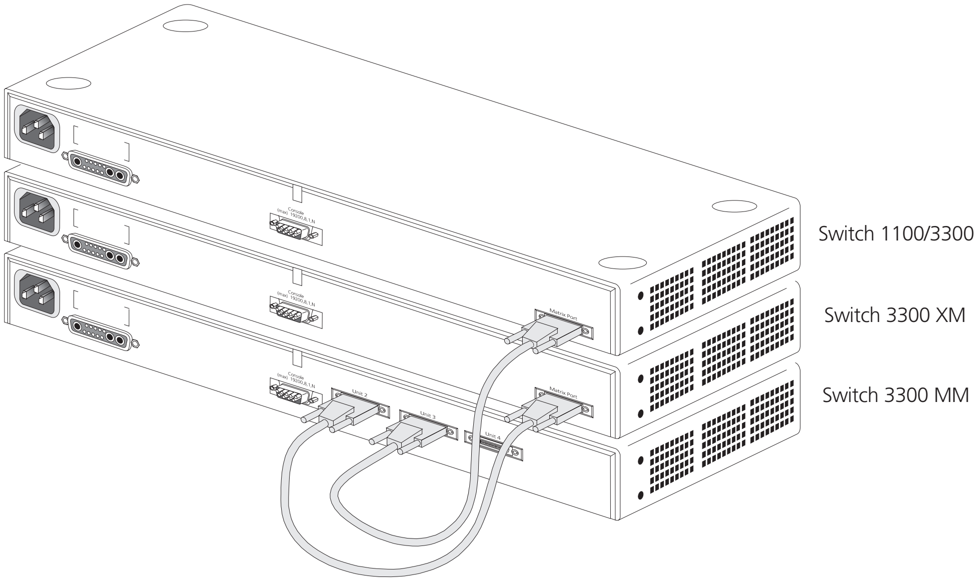
   c Connect a third Matrix Cable to the port marked Unit 4 on the Switch 3300 MM. Connect the other end of this cable to the Matrix Port on the Switch at the top of the stack.

4 If you use the management software of the units:

- Ensure that all the units have the same version of management software
- Ensure that you re-configure the stack-wide features on all the units

For more information about management software, see "Managing the Switch" on page 32.

Figure 9 A stack of three units


Switch 1100/3300
Switch 3300 XM
Switch 3300 MM

The Power-up Sequence

The following sections describe how to get your Switch 3300 XM powered-up and ready for operation.

Connecting a Redundant Power System

You can connect a SuperStack Advanced Redundant Power System (part number 3C16071B) to the Switch. This unit, which is also known as an ARPS, is designed to maintain the power to your Switch if a power supply failure occurs.

For normal redundancy, the unit requires one Type 2A Power Module. For full redundancy, the unit requires two Type 2A Power Modules combined using a Type 2 Y-Cable.

Check with your supplier that you have the correct Power Modules and cables for your ARPS unit.

CAUTION: *The Switch can only use a SuperStack Advanced Redundant Power System output.*

Powering-up the Switch 3300 XM

Use the following sequence of steps to power-up the Switch.

CAUTION: *The Switch has no ON/OFF switch; the only method of connecting or disconnecting main power is by connecting or disconnecting the power cord.*

1. Plug the power cord into the power socket at the rear of the Switch.
2. Plug the other end of the power cord into your power outlet

   The Switch powers-up and runs through its Power On Self Test (POST), which takes approximately 12 seconds.

Checking for Correct Operation

During the Power On Self Test, all ports on the Switch are disabled and the LEDs light in the following sequence:

- All unit LEDs light
- Port Status LEDs light in a rapid cycle

When the POST has completed, check the Power/Self Test LED to check that your Switch is operating correctly. Table 4 shows possible colors for the LED.

Table 4 LED colors

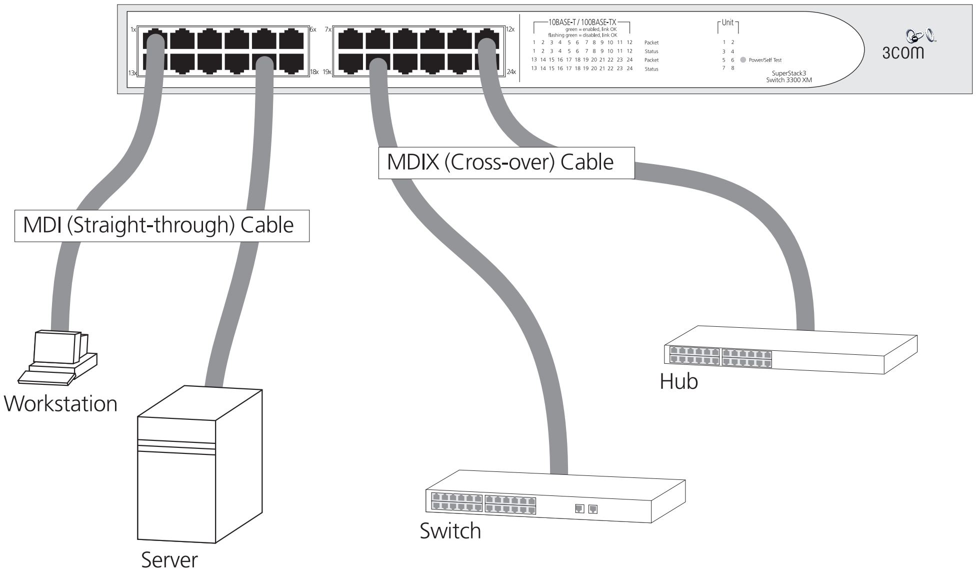
Color	State
Green	The Switch is powered-up and operating normally
Yellow	The Switch has failed its Power On Self Test. This occurs if any of the ports fail during power-up.
Off	The Switch is not receiving power.

If there is evidence of a problem, see "Solving Problems Indicated by LEDs" on page 31.

Choosing the Correct Cables

All of the ports on the front of the Switch 3300 XM are configured as MDIX (cross-over). If you want to make a connection to another MDIX port, you need a *cross-over* cable. Most of the 10BASE-T and 100BASE-TX ports on 3Com devices are MDIX-only. Many ports on workstations and servers are configured as MDI (straight-through). If you want to make a connection to an MDI port, you need to use a standard *straight-through* cable. This is illustrated in Figure 10.

Figure 10 Connecting other devices to the Switch 3300 XM


10BASE-T / 100BASE-TX
Unit
Packet
Status
Power/Self Test
SuperStack3
Switch 3300 XM
3com
MDIX (Cross-over) Cable
MDI (Straight-through) Cable
Workstation
Server
Switch
Hub

Solving Problems Indicated by LEDs

If the LEDs on the Switch indicate a problem, refer to Table 5 which contains a list of problems and suggested solutions.

Table 5 Problems indicated by LEDs

Problem	Suggested Solution
A Power LED does not light	Check that the power cable is firmly connected to the relevant Switch unit and to the supply outlet. If the connection is secure and there is still no power, you may have a faulty power cord.
On powering-up, the Power/Self Test LED lights yellow and a Unit LED lights green	The relevant Switch unit has failed its Power On Self Test (POST) because of an internal problem. Contact your supplier for advice.
A link is connected and yet the Status LED for the port does not light	Check that: ■ All connections are secure. ■ The devices at both ends of the link are powered-up. ■ The connection uses cross-over cable if you are linking a 10BASE-T or 100BASE-TX port with a device that is MDIX-only.

For information about solving problems when managing the Switch, refer to the Problem Solving chapter in the “SuperStack Switch Management Guide”.

Managing the Switch

The Switch contains software that allows you to change and monitor the way it works. This *management software* is not required to get the Switch working, but if you do use it, you may improve the efficiency of the Switch and therefore improve the overall performance of your network. For information on managing the Switch using the management software, refer to the “SuperStack Switch Management Guide”.

A

SAFETY INFORMATION

You must read the following safety information before carrying out any installation or removal of components, or any maintenance procedures on the Switch 3300 XM.

WARNING: *Warnings contain directions that you must follow for your personal safety. Follow all directions carefully.*
You must read the following safety information carefully before you install or remove the unit.

AVERTISSEMENT: *Les avertissements présentent des consignes que vous devez respecter pour garantir votre sécurité personnelle. Vous devez respecter attentivement toutes les consignes.*
Nous vous demandons de lire attentivement les consignes suivantes de sécurité avant d'installer ou de retirer l'appareil.

WARNHINWEIS*: Warnhinweise enthalten Anweisungen, die Sie zu Ihrer eigenen Sicherheit befolgen müssen. Alle Anweisungen sind sorgfältig zu befolgen.*
Sie müssen die folgenden Sicherheitsinformationen' sorgfältig durchlesen, bevor Sie das Gerät installieren oder ausbauen.

Important Safety Information

- Installation and removal of the unit must be carried out by qualified personnel only.
- If installing the Switch unit in a stack with SuperStack Hub units, the Switch 3300 XM unit must be installed below the Hub units.
- The unit should never be connected to an A.C. outlet (power supply) without an earth (ground) connection.
- The unit must be connected to an earthed (grounded) outlet to comply with European safety standards.
- Power Cord Set:
  This must be approved for the country where it is used:

U.S.A. and Canada	- The cord set must be UL-approved and CSA certified. - The minimum specification for the flexible cord is: No. 18 AWG Type SV or SJ 3-conductor - The cord set must have a rated current capacity of at least 10A. - The attachment plug must be an earth-grounding type with a NEMA 5-15P (15A, 125V) or NEMA 6-15P (15A, 250V) configuration.
Denmark	- The supply plug must comply with section 107-2-D1, standard DK2-1a or DK2-5a.
Switzerland	- The supply plug must comply with SEV/ASE 1011.

- The appliance coupler (the connector to the unit and not the wall plug) must have a configuration for mating with an EN60320/IEC320 appliance inlet.
- The socket outlet must be near to the unit and easily accessible. You can only remove power from the unit by disconnecting the power cord from the outlet.
- This unit operates under SELV (Safety Extra Low Voltage) conditions according to IEC 950. The conditions are only maintained if the equipment to which it is connected also operates under SELV conditions.
- Switzerland only:
  The supply plug must comply with SEV/ASE 1011.

- France and Peru only:
  This unit cannot be powered from IT† supplies. If your supplies are of IT type, this unit must be powered by 230V (2P+T) via an isolation transformer ratio 1:1, with the secondary connection point labelled Neutral, connected directly to earth (ground).
  †Impédance à la terre.
- U.K. only:
  The Switch 3300 XM is covered by Oftel General Approval, NS/G/12345/J/100003, for indirect connection to a public telecommunications system. This can only be achieved using the console port on the unit and an approved modem.
- Sockets for Redundant Power System (RPS):
  Only connect an *Advanced Redundant Power System (3C16071B)* with Type 2A Power Modules and Type 2 cables to the *Redundant Power System* socket.

WARNING: RJ-45 Ports. *These are shielded RJ-45 data sockets. They cannot be used as telephone sockets. Only connect RJ-45 data connectors to these sockets.*

Either shielded or unshielded data cables with shielded or unshielded jacks can be connected to these data sockets.

L’information de Sécurité Importante

- L'installation et la dépose de ce groupe doivent être confiés à un personnel qualifié.
- Si vous entassez l'unité Switch avec les unités SuperStack Hub, l'unité Switch 3300 XM doit être installée en dessous des unités Hub plus étroites.
- L’unité ne devrait pas etre branchee a une prise de courant C.A. (source de courant) sous aucun prétexte sans un branchement mise à la terre (mise à la masse).
- Vous devez raccorder ce groupe à une sortie mise à la terre (mise à la masse) afin de respecter les normes européennes de sécurité.
- Cordon électrique:
  Il doit être agréé dans le pays d'utilisation:
  - Etats-Unis et Canada
    - Le cordon doit avoir reçu l'homologation des UL et un certificat de la CSA
    - Le cordon souple doit respecter, à titre minimum, les spécifications suivantes :
    - calibre 18 AWG
    - type SV ou 5J
    - à 3 conducteurs
    - Le cordon doit être en mesure d'acheminer un courant nominal d'au moins 10 A
    - La prise femelle de branchement doit être du type à mise à la terre (mise à la masse) et respecter la configuration NEMA 5-15P (15 A, 125 V) ou NEMA 6-15P (15 A, 250 V)
  - Danemark
    - La prise mâle d'alimentation doit respecter la section 107-2 D1 de la norme DK2 1a ou DK2 5a
  - Suisse
    - La prise mâle d'alimentation doit respecter la norme SEV/ASE 1011
- Le coupleur d'appareil (le connecteur du groupe et non pas la prise murale) doit respecter une configuration qui permet un branchement sur une entrée d'appareil EN60320/CEI 320.
- La prise secteur doit se trouver à proximité de l’appareil et son accès doit être facile. Vous ne pouvez mettre l’appareil hors circuit qu'en débranchant son cordon électrique au niveau de cette prise.

- L'appareil fonctionne à une tension extrêmement basse de sécurité qui est conforme à la norme CEI 950. Ces conditions ne sont maintenues que si l'équipement auquel il est raccordé fonctionne dans les mêmes conditions.
- France et Pérou uniquement:
  Ce groupe ne peut pas être alimenté par un dispositif à impédance à la terre. Si vos alimentations sont du type impédance à la terre, ce groupe doit être alimenté par une tension de 230 V (2 P+T) par le biais d'un transformateur d'isolement à rapport 1:1, avec un point secondaire de connexion portant l'appellation Neutre et avec raccordement direct à la terre (masse).
- Branchez uniquement un *Advanced Redundant Power System (3C16071B)* avec Type 2A Power Modules et Type 2 câbles sur la prise femelle du *Redundant Power System*.

AVERTISSEMENT: Les ports RJ-45. *Il s'agit de prises femelles blindées de données RJ-45. Vous ne pouvez pas les utiliser comme prise de téléphone. Branchez uniquement des connecteurs de données RJ-45 sur ces prises femelles.*

Les câbles de données blindés ou non blindés, avec les jacks blindés ou non blindés, l'un ou l'autre, peuvent être branchés à ces prises de courant de données.

Wichtige Sicherheitsinformationen

- Die Installation und der Ausbau des Geräts darf nur durch Fachpersonal erfolgen.
- Wenn die Switch 3300 XM Einheit in einer Stapel mit anderen SuperStack Hub Einheiten eingebaut werden soll, muß die Switch 3300 XM Einheit unter die schmaleren Hub Einheiten eingebaut werden.
- Das Gerät ist unter keinen umständen an einen Wechselstrom (A.C.) Netzstecker anzuschließen ohne erdungsleitung.
- Das Gerät muß an eine geerdete Steckdose angeschlossen werden, die die europäischen Sicherheitsnormen erfüllt.
- Der Anschlußkabelsatz muß mit den Bestimmungen des Landes übereinstimmen, in dem er verwendet werden soll.
- Der Gerätestecker (der Anschluß an das Gerät, nicht der Wandsteckdosenstecker) muß eine passende Konfiguration für einen Geräteeingang gemäß EN60320/IEC320 haben.
- Die Netzsteckdose muß in der Nähe des Geräts und leicht zugänglich sein. Die Stromversorgung des Geräts kann nur durch Herausziehen des Gerätenetzkabels aus der Netzsteckdose unterbrochen werden.
- Der Betrieb dieses Geräts erfolgt unter den SELV-Bedingungen (Sicherheitskleinstspannung) gemäß IEC 950. Diese Bedingungen sind nur gegeben, wenn auch die an das Gerät angeschlossenen Geräte unter SELV-Bedingungen betrieben werden.
- Nur ein *Advanced Redundant Power System* (3C16071B) mit Type 2A Power Modules und Type 2 kabel an den *Redundant Power System* Anschluß anschließen.

WARNHINWEIS: ***RJ-45 Ports. RJ-45-Anschlüsse.*** *Dies sind abgeschirmte RJ-45-Datenbuchsen. Sie können nicht als Telefonanschlußbuchsen verwendet werden. An diesen Buchsen dürfen nur RJ-45-Datenstecker angeschlossen werden.*

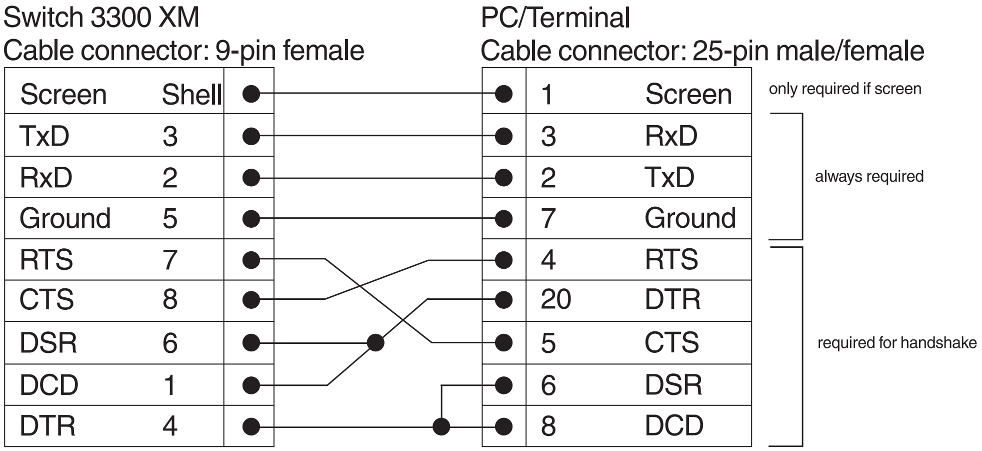
Diese Datenstecker können entweder mit abgeschirmten oder unabgeschirmten Datenkabeln mit abgeschirmten oder unabgeschirmten Klinkensteckern verbunden werden.

B

PIN-OUTS

Null Modem Cable

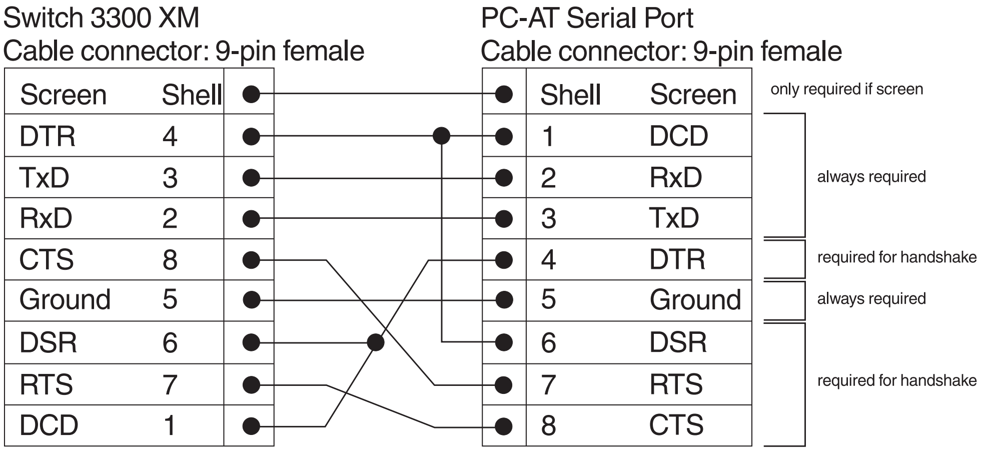
9-pin to RS-232 25-pin



Switch 3300 XM
Cable connector: 9-pin female
PC/Terminal
Cable connector: 25-pin male/female
Screen Shell
TxD 3
RxD 2
Ground 5
RTS 7
CTS 8
DSR 6
DCD 1
DTR 4
1 Screen
3 RxD
2 TxD
7 Ground
4 RTS
20 DTR
5 CTS
6 DSR
8 DCD
only required if screen
always required
required for handshake

PC-AT Serial Cable

9-pin to 9-pin



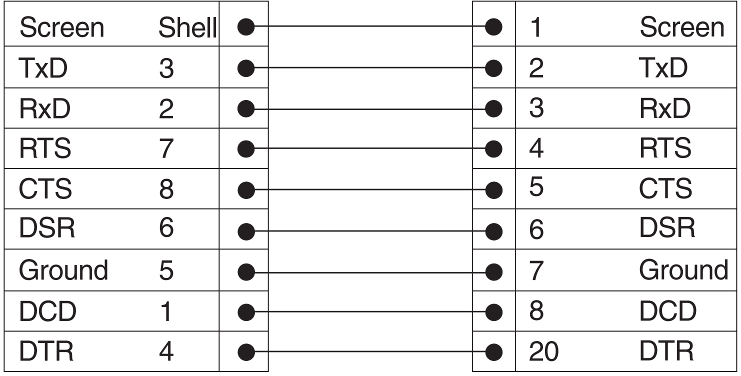
Switch 3300 XM
Cable connector: 9-pin female
PC-AT Serial Port
Cable connector: 9-pin female
Screen Shell
DTR 4
TxD 3
RxD 2
CTS 8
Ground 5
DSR 6
RTS 7
DCD 1
Shell Screen
1 DCD
2 RxD
3 TxD
4 DTR
5 Ground
6 DSR
7 RTS
8 CTS
only required if screen
always required
required for handshake
always required
required for handshake

Modem Cable

9-pin to RS-232 25-pin

Switch 3300 XM
Cable connector: 9-pin female

RS-232 Modem Port
Cable connector: 25-pin male



Signal	9-pin	25-pin	Signal
Screen	Shell	1	Screen
TxD	3	2	TxD
RxD	2	3	RxD
RTS	7	4	RTS
CTS	8	5	CTS
DSR	6	6	DSR
Ground	5	7	Ground
DCD	1	8	DCD
DTR	4	20	DTR

RJ45 Pin Assignments

Pin assignments are identical for 10BASE-T and 100BASE-TX RJ45 connectors

Table 6 Pin assignments

Pin Number	Signal	Function
Ports configured as MDI		
1	TxData +	Transmit data
2	TxData –	Transmit data
3	RxData +	Receive Data
4	Not assigned	
5	Not assigned	
6	RxData –	Receive data
7	Not assigned	
8	Not assigned	

Table 6 Pin assignments

Pin Number	Signal	Function
Ports configured as MDIX		
1	RxData +	Receive Data
2	RxData –	Receive Data
3	TxData +	Transmit data
4	Not assigned	
5	Not assigned	
6	TxData –	Transmit data
7	Not assigned	
8	Not assigned	

C TECHNICAL SPECIFICATIONS

Physical Dimensions	Height: 43.6mm x Width: 440mm x Depth: 247.5mm Weight: 5kg (11lbs)
Environmental Requirements	
Operating Temperature	0° to 50°C (32° to 122°F)
Storage Temperature	–10° to +70°C (14° to 158°F)
Operating Humidity	10–95% relative humidity, non-condensing
Standards	EN60068 (IEC68) — various parts
Safety	
Agency Certifications	UL 1950, EN60950, CSA 22.2 No. 950, IEC 60950
EMC	
Emissions	EN55022 Class A, FCC Part 15 subpart B Class A, ICES-003 Class A, VCCI Class A, AS/NZS 3548 Class A, CNS 13438 Class A
Immunity	EN50082-1
Heat Dissipation	75 watts maximum
Power Supply	
AC Line Frequency	50/60Hz
Input Voltage Options	90–240 VAC
Current Rating	3amps (maximum)

(continued)

Standards Supported	SNMP	Terminal Emulation
	SNMP protocol (RFC 1157)	Telnet (RFC 854)
	MIB-II (RFC 1213)	Protocols Used for Administration
	Bridge MIB (RFC 1493)	UDP (RFC 768)
	Repeater MIB (RFC 1516)	IP (RFC 791)
	VLAN MIB (RFC 1573)	ICMP (RFC 792)
	RMON MIB (RFC 1271)	TCP (RFC 793)
	BOOTP (RFC 951)	ARP (RFC 826)
		TFTP (RFC 783)
Year 2000 Compliance	For information on Year 2000 Compliance and 3Com products, visit the 3Com Year 2000 Web page: **`http://www.3Com.com/products/yr2000.html`**	

D TECHNICAL SUPPORT

3Com provides easy access to technical support information through a variety of services. This appendix describes these services.

Information contained in this appendix is correct at time of publication. For the most recent information, 3Com recommends that you access the 3Com Corporation World Wide Web site.

Online Technical Services

3Com offers worldwide product support 24 hours a day, 7 days a week, through the following online systems:

- World Wide Web site
- 3Com Knowledgebase Web Services
- 3Com FTP site

World Wide Web Site

To access the latest networking information on the 3Com Corporation World Wide Web site, enter this URL into your Internet browser:

`http://www.3com.com/`

This service provides access to online support information such as technical documentation and software, as well as support options that range from technical education to maintenance and professional services.

3Com Knowledgebase Web Services

This interactive tool contains technical product information compiled by 3Com expert technical engineers around the globe. Located on the World Wide Web at `http://knowledgebase.3com.com`, this service gives all 3Com customers and partners complementary, round-the-clock access to technical information on most 3Com products.

3Com FTP Site

Download drivers, patches, software, and MIBs across the Internet from the 3Com public FTP site. This service is available 24 hours a day, 7 days a week.

To connect to the 3Com FTP site, enter the following information into your FTP client:

- Hostname: `ftp.3com.com`
- Username: `anonymous`
- Password: `<your Internet e-mail address>`

You do not need a user name and password with Web browser software such as Netscape Navigator and Internet Explorer.

Support from Your Network Supplier

If you require additional assistance, contact your network supplier. Many suppliers are authorized 3Com service partners who are qualified to provide a variety of services, including network planning, installation, hardware maintenance, application training, and support services.

When you contact your network supplier for assistance, have the following information ready:

- Product model name, part number, and serial number
- A list of system hardware and software, including revision levels
- Diagnostic error messages
- Details about recent configuration changes, if applicable

If you are unable to contact your network supplier, see the following section on how to contact 3Com.

Support from 3Com

If you are unable to obtain assistance from the 3Com online technical resources or from your network supplier, 3Com offers technical telephone support services. To find out more about your support options, call the 3Com technical telephone support phone number at the location nearest you.

When you contact 3Com for assistance, have the following information ready:

- Product model name, part number, and serial number
- A list of system hardware and software, including revision levels

- Diagnostic error messages
- Details about recent configuration changes, if applicable

Here is a list of worldwide technical telephone support numbers:

Country	Telephone Number	Country	Telephone Number
Asia, Pacific Rim			
Australia	1 800 678 515	P.R. of China	10800 61 00137 or 021 6350 1590
Hong Kong	800 933 486		
India	+61 2 9937 5085	Singapore	800 6161 463
Indonesia	001 800 61 009	S. Korea	82 2 3455 6455
Japan	0531 61 6439	From anywhere in S. Korea:	00798 611 2230
Malaysia	1800 801 777	From Seoul:	00798 611 2230
New Zealand	0800 446 398	Taiwan, R.O.C.	0080 611 261
Pakistan	+61 2 9937 5083	Thailand	001 800 611 2000
Philippines	1235 61 266 2602		
Europe			
From anywhere in Europe, call:	+31 (0)30 6029900 phone +31 (0)30 6054396 fax		
Europe, South Africa, and Middle East			
From the following countries, you may use the toll-free numbers:			
Austria	0800 297468	Middle East	1800 945 3794
Belgium	0800 71429	Netherlands	0800 0227788
Denmark	800 17309	Norway	800 11376
Finland	0800 113153	Poland	00800 3111206
France	0800 917959	Portugal	0800 831416
Germany	0800 1821502	Russia	0800 995014
Hungary	06800 12813	South Africa	0800 995014
Ireland	1800 553117	Spain	900 983125
Israel	1800 9453794	Sweden	020 795482
Italy	1678 79489	Switzerland	0800 55 3072
Luxembourg	0800 3625	U.K.	0800 966197
Latin America			
Argentina	5411 4510 3200	Mexico	01 800 CARE (01 800 2273)
Brazil	0800 13 3266	Puerto Rico	800 666 5065
Colombia	571 629 4827	South America	1800 666 5065
North America	1 800 NET 3Com (1 800 638 3266) Enterprise Customers: 1 800 876-3266		

Returning Products for Repair

Before you send a product directly to 3Com for repair, you must first obtain an authorization number. Products sent to 3Com without authorization numbers will be returned to the sender unopened, at the sender's expense.

To obtain an authorization number, call or fax:

Country	Telephone Number	Fax Number
Asia, Pacific Rim	+ 65 543 6500	+ 65 543 6348
Brazil	5511 523 2725	
Europe, South Africa, and Middle East	+ 31 30 6029900	+ 31 30 6029999
Central and South America	525 201 0075	
From the following countries, you may call the toll-free numbers; select option 2 and then option 2:		
Austria	0800 297468	
Belgium	0800 71429	
Denmark	800 17309	
Finland	0800 113153	
France	0800 917959	
Germany	0800 1821502	
Hungary	00800 12813	
Ireland	1800553117	
Israel	1800 9453794	
Italy	1678 79489	
Netherlands	0800 0227788	
Norway	800 11376	
Poland	00800 3111206	
Portugal	0800 831416	
South Africa	0800 995014	
Spain	900 983125	
Sweden	020 795482	
Switzerland	0800 55 3072	
U.K.	0800 966197	
U.S.A. and Canada	1 800 NET 3Com (1 800 638 3266) Enterprise Customers: 1 800 876 3266	1 408 326 7120 (not toll-free)

GLOSSARY

10BASE-T	The IEEE specification for 10Mbps Ethernet over Category 3, 4 or 5 twisted pair cable.
100BASE-FX	The IEEE specification for 100Mbps Fast Ethernet over fiber-optic cable.
100BASE-TX	The IEEE specification for 100Mbps Fast Ethernet over Category 5 twisted-pair cable.
1000BASE-SX	The IEEE specification for 1000Mbps Gigabit Ethernet over fiber-optic cable.
1000BASE-T	The IEEE specification for 1000Mbps Gigabit Ethernet over Category 5 twisted-pair cable.
auto-negotiation	A feature on twisted pair ports that allows them to advertise their capabilities for speed, duplex and flow control. When connected to a port that also supports auto-negotiation, the link can automatically configure itself to the optimum setup.
backbone	The part of a network used as a primary path for transporting traffic between network segments.
bandwidth	The information capacity, measured in bits per second, that a channel can transmit. The bandwidth of Ethernet is 10Mbps, the bandwidth of Fast Ethernet is 100Mbps.
baud	The signalling rate of a line, that is, the number of transitions (voltage or frequency changes) made per second. Also known as *line speed*.

bridge	A device that interconnects two LANs of a different type to form a single logical network that comprises of two network segments. Bridges learn which endstations are on which network segment by examining the source addresses of packets. They then use this information to forward packets based on their destination address. This process is known as filtering.
broadcast	A packet sent to all devices on a network.
broadcast storm	Multiple simultaneous broadcasts that typically absorb all the available network bandwidth and can cause a network to fail. Broadcast storms can be due to faulty network devices.
collision	A term used to describe two colliding packets in an Ethernet network. Collisions are a part of normal Ethernet operation, but a sudden prolonged increase in the number of collisions can indicate a problem with a device, particularly if it is not accompanied by a general increase in traffic.
CSMA/CD	Carrier-sense Multiple Access with Collision Detection. The protocol defined in Ethernet and IEEE 802.3 standards in which devices transmit only after finding a data channel clear for a period of time. When two devices transmit simultaneously, a collision occurs and the colliding devices delay their retransmissions for a random length of time.
endstation	A computer, printer or server that is connected to a network.
Ethernet	A LAN specification developed jointly by Xerox, Intel and Digital Equipment Corporation. Ethernet networks use CSMA/CD to transmit packets at a rate of 10Mbps over a variety of cables.
Ethernet address	See *MAC address*.
Fast Ethernet	An Ethernet system that is designed to operate at 100Mbps.
forwarding	The process of sending a packet toward its destination using a networking device.
filtering	The process of screening a packet for certain characteristics, such as source address, destination address, or protocol. Filtering is used to determine whether traffic is to be forwarded, and can also prevent unauthorized access to a network or network devices.

flow control	A congestion control mechanism. Congestion is caused by devices sending traffic to already overloaded port on a Switch. Flow control prevents packet loss and inhibits devices from generating more traffic until the period of congestion ends.
full duplex	A system that allows packets to be transmitted and received at the same time and, in effect, doubles the potential throughput of a link.
half duplex	A system that allows packets to transmitted and received, but not at the same time. Contrast with *full duplex*.
hub	A device that regenerates LAN traffic so that the transmission distance of that signal can be extended. Hubs are similar to repeaters, in that they connect LANs of the same type; however they connect more LANs than a repeater and are generally more sophisticated.
IEEE	Institute of Electrical and Electronics Engineers. This American organization was founded in 1963 and sets standards for computers and communications.
IEEE 802.1D	A standard that defines the behavior of bridges in an Ethernet network.
IETF	Internet Engineering Task Force. An organization responsible for providing engineering solutions for TCP/IP networks. In the network management area, this group is responsible for the development of the SNMP protocol.
IP	Internet Protocol. IP is a layer 3 network protocol that is the standard for sending data through a network. IP is part of the TCP/IP set of protocols that describe the routing of packets to addressed devices.
IPX	Internetwork Packet Exchange. IPX is a layer 3 and 4 network protocol designed for networks that use Novell Netware.
IP address	Internet Protocol address. A unique identifier for a device attached to a network using TCP/IP. The address is written as four octets separated with periods (full-stops), and is made up of a network section, an optional subnet section and a host section.
LAN	Local Area Network. A network of endstations (such as PCs, printers, servers) and network devices (hubs and switches) that cover a relatively small geographic area (usually not larger than a floor or building). LANs are characterized by high transmission speeds over short distances (up to 1000m).

line speed	See *baud*.
loop	An event that occurs when two network devices are connected by more than one path, thereby causing packets to repeatedly cycle around the network and not reach their destination.
MAC	Media Access Control. A protocol specified by the IEEE for determining which devices have access to a network at any one time.
MAC address	Media Access Control address; also called hardware or physical address. A layer 2 address associated with a particular network device. Most devices that connect to a LAN have a MAC address assigned to them as they are used to identify other devices in a network. MAC addresses are 6 bytes long.
MDI	Medium Dependent Interface. An Ethernet port connection where the transmitter of one device is connected to the receiver of another device.
MDI-X	Medium Dependent Interface Cross-over. An Ethernet port connection where the internal transmit and receive lines are crossed.
multicast	A packet sent to a specific group of endstations on a network.
NIC	Network Interface Card. A circuit board installed in an endstation that allows it to be connected to a network.
POST	Power On Self Test. An internal test that a Switch carries out when it is powered-up.
protocol	A set of rules for communication between devices on a network. The rules dictate format, timing, sequencing and error control.
repeater	A simple device that regenerates LAN traffic so that the transmission distance of that signal can be extended. Repeaters are used to connect two LANs of the same network type.
router	A device that provides WAN links between geographically separate networks.
RPS	Redundant Power System. A device that provides a backup source of power when connected to a Switch.
segment	A section of a LAN that is connected to the rest of the network using a switch or bridge.

server	A computer in a network that is shared by multiple endstations. Servers provide endstations with access to shared network services such as computer files and printer queues.
SLIP	Serial Line Internet Protocol. A protocol that allows IP to run over a serial line (console port) connection.
SNMP	Simple Network Management Protocol. The current IETF standard protocol for managing devices on an TCP/IP network.
stack	A group of network devices that are integrated to form a single logical device.
STP	See *Spanning Tree Protocol (STP)*.
SuperStack	In this guide, the generic term SuperStack refers to any SuperStack II and SuperStack 3 device. SuperStack II and SuperStack 3 devices can be connected together to form a SuperStack system.
switch	A device that interconnects several LANs to form a single logical LAN that comprises of several LAN segments. Switches are similar to bridges, in that they connect LANs of a different type; however they connect more LANs than a bridge and are generally more sophisticated.
Switch Database	A database that is stored by a switch to determine if a packet should be forwarded, and which port should forward the packet if it is to be forwarded.
TCP/IP	Transmission Control Protocol/Internet Protocol. This is the name for two of the most well-known protocols developed for the interconnection of networks. Originally a UNIX standard, TCP/IP is now supported on almost all platforms, and is the protocol of the Internet. TCP relates to the content of the data travelling through a network — ensuring that the information sent arrives in one piece when it reaches its destination. IP relates to the address of the endstation to which data is being sent, as well as the address of the destination network.
Telnet	A TCP/IP application protocol that provides a virtual terminal service, letting a user log into another computer system and access a device as if the user were connected directly to the device.
TFTP	Trivial File Transfer Protocol. Allows you to transfer files (such as software upgrades) from a remote device using the local management capabilities of the Switch.

unicast	A packet sent to a single endstation on a network.
WAN	Wide Area Network. A communications network that covers a wide area. A WAN can cover a large geographic area, and may contain several LANs within it.

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This warranty applies to customers located in the United States, Australia, Canada (except Quebec), Ireland, New Zealand, U.K., and other English language countries, and countries for which a translation into the local language is not provided.

SUPERSTACK® 3 SWITCH 3300 XM

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3Com Corporation
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Santa Clara, CA 95052-8145
(408) 326-5000

June 23, 2000

REGULATORY NOTICES

FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference to radio communications, in which case the user will be required to correct the interference at their own expense.

Information To The User

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
- Relocate the equipment with respect to the receiver.
- Move the equipment away from the receiver.
- Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

How to Identify and Resolve Radio-TV Interference Problems

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

In order to meet FCC emissions limits, this equipment must be used only with cables which comply with IEEE 802.3.

CSA STATEMENT

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

CE STATEMENT (EUROPE)

This product complies with the European Low Voltage Directive 73/23/EEC and EMC Directive 89/336/EEC as amended by European Directive 93/68/EEC.

Warning: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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